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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,279	12/22/2000	Samir Armando Salama	839-893	8177

7590

12/11/2002

NIXON & VANDERHYE P.C.
8th Floor
1100 North Glebe Road
Arlington, VA 22201

EXAMINER

CUEVAS, PEDRO J

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 12/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,279

Examiner

Pedro J. Cuevas

Applicant(s)

SALAMAH ET AL.

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-5, 7, 9-10, 12-13, 15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,644,179 to Staub et al. in view of U.S. Patent No. 4,415,882 to Aiba.

Staub et al. discloses the construction of gas cooled end turns for dynamoelectric machine rotor, comprising:

a rotor (10) having a spindle and a body portion (12), a rotor winding having axially extending coils (20) and end turns (24) defining a plurality of concentric endwindings extending axially beyond at least one end of said body portion; and at least one, or a plurality of spaceblocks (32) located between adjacent said endwindings so as to define cavities (34) therebetween, said spaceblock having:

first and second sidewalls engaging said adjacent endwindings,
an upstream wall, and
a downstream wall.

However, it fails to disclose a downstream wall of said spaceblock having a non-planar contour to lower a suction pressure developed adjacent a trailing edge of the spaceblock to enhance cooling flow.

Aiba teach the construction of stators of dynamoelectric machines having short outer spacer blocks (4b') having a downstream wall of said spaceblock having a non-planar contour (channel 4c) for the purpose of creating a pressure difference at the inlet and outlet portions of the channel (4c) caused by the difference in the gas flow speed.

It would have been obvious to one skilled in the art at the time the invention was made to use the spacer blocks disclosed by Aiba on the gas cooled end turns disclosed by Staub et al. for the purpose of creating a pressure difference at the inlet and outlet portions of the channel (4c) caused by the difference in the gas flow speed.

3. With regards to claims 2, 8, 10 and 16, Aiba disclose a downstream wall having a re-entrant contour (Figure 7) to enhance rotating cavity cooling flow.

It must be noted that it would have been obvious to one having ordinary skill in the art at the time the invention was made to integrally form the re-entrant portion with the body portion, since it has been held that forming in one piece an article, which has formerly been formed in two pieces and put together, involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). The term "integral" is sufficiently broad to embrace constructions united by such means as fastening and welding. *In re Hotte*, 177 USPQ 326, 328 (CCPA 1973).

4. With regards to claims 3, 6, 11 and 14, Staub et al. in view of Aiba discloses the claimed invention except for the downstream wall being defined as a generally part in circular concave curve.

It would have been an obvious matter of design choice to give the downstream wall a generally part in circular concave curve, since the applicant has not disclosed that this particular

shape solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the generally rectangular shape used by Aiba.

5. With regards to claims 4, 7, 12 and 15, Aiba disclose an upstream wall, which is generally planar.

6. With regards to claims 5 and 13, Staub et al. disclose a spaceblock which is comprised of a generally rectangular main body portion (32), said main body portion defining said upstream wall and portions of said side walls as shown in Figure 3; and Aiba discloses a re-entrant portion (Figure 7) defining other portions of said side walls and said downstream wall.

Response to Arguments

7. Applicant's arguments filed October 17, 2002 have been fully considered but they are not persuasive.

8. In response to applicant's argument that the teachings of Aiba are used in stators, not in rotors, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Moreover, it must be noted that dynamoelectric stators can have coils to make stator windings, which will need spaceblocks to separate the end turns.

9. In response to applicant's argument that Aiba is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order

to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the structural characteristics of the Aiba spacers can be implemented in the Staub spaceblocks.

10. In response to applicant's argument that the cooling channel in Aiba's spacer block results in a new forced convection cooling region, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

11. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

12. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas
December 9, 2002



NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800